COPYING Y COMBINATOR

A framework for developing Seed Accelerator Programmes

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Abstract & Executive Summary

Seed accelerator programmes are a new model of funding and assisting startup companies and their founders, and were pioneered by the founders of Y Combinator. Instead of funding one startup at a time, they are mentored in batches for efficiency. The model is different from both traditional seed-stage investing and business incubators, and new variations of seed accelerators are being founded each year.

The objective of this project is to evaluate these programs and address the question: How do you design a successful seed accelerator programme? By evaluating the reasons startups and the programme founders get involved, opportunities for flexibility can be determined. Subsequently, a framework for creating a new seed accelerator programme is developed.

There are three intertwined elements that define if a seed accelerator programme will be successful. They are the intersection of highly qualified people that are experienced both in operating startups and angel investing, a clear technology or industry focus to the programme and a very distinct and compelling reason for existence. Once those three elements have been clearly and honestly defined, the remainder of the programme definition is straightforward.

A successful technology or industry focus is unlikely to be an exact copy of Y Combinator. Their focus on web applications and technologies means they have become the top-tier choice for startups in that market. But using the framework discussed in different contexts can lead the founders of new seed accelerator programmes to maximize their chances for success.

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Project Objective

The objective of this study is to evaluate the various aspects involved in successful seed accelerator programmes. Specifically, this paper intends to address the question:

How do you design a successful seed accelerator program?

Methodology

The project began by defining what it means to be a seed accelerator programme, and how it differed from other startup and incubator business models. After that, a full list of seed accelerator programmes was compiled along with a list of the startups those programmes funded.

In the next phase of the project a sample accelerator programme financial model was built to show how the programmes could be financially successful. A hypothesis for the reasons that both startup entrepreneurs and accelerator programme founders participate was made. A variety of entrepreneurs were surveyed and a selection of programmes founders were interviewed in order to assess the hypothesis. Additionally, a variety of areas were found where accelerator programmes could innovate.

All of the findings were then analysed to produce a framework and set of recommendations for future seed accelerator programme founders.

Conceptual Review

There is little serious literature available about seed accelerator programmes, despite the presence of a significant number of articles in the popular press publicizing the concept. While significant literature exists on startups and entrepreneurship, these accelerator programmes are so new that they still consider their own success an open question.

There is, however, a long tradition of business incubators around the world. These incubators are often found in and near Universities, and provide inexpensive office space and mentorship to entrepreneurs and their companies. Just like seed accelerator programmes, incubators focus on companies in the earliest stages of development, and both models involve an application process for admission.

Where these models differ is largely in how much equity they take in the participating companies, and how each model makes money. Business incubators generally do not take equity in their startups, whereas seed accelerators generally do take equity in their startups. While the incubators are typically run as non-profits and charge startups for rent and services, accelerators are typically run as for-profit ventures and provide entrepreneurs with startup funding.[1]

This is a dramatic difference in business model, and is why Y Combinator and other seed accelerator programmes can be seen as such a break from past models. The accelerator's incentives are directly aligned with their startups; only when a startup succeeds will an accelerator be financially viable. Finally, seed accelerators are less reliant on funding from government sources, which is quoted as one of the top value-adds from business incubators.[2]

[1] Lalkaka (2002)

[2] Mian (1995)

The Model Startup Seed Accelerator Programme

Y Combinator is one of the most successful seed accelerator programmes. It was founded in March 2005 and its early successes, strong brand and leadership through continual innovations have set the standard for other programmes around the world. Virtually all of the competitors founded after Y Combinator have been derivations on the Y Combinator theme.

Startup Seed Accelerator Key Elements

The accelerator programmes considered in this paper consist of five elements:

- Funding, typically to the seed level[3]
- Company founders are small teams with technical backgrounds
- Each cohort is supported for a defined period of time
- Education programme focusing on
    - business advice
    - product advice
- Networking programme to meet and/or contact other investors and advisors

Programmes may or may not include:

- Office space, whether free or subsidized
- A Demo Day for funded companies

A full list of known seed accelerator programmes can be found in Appendix A.

Excluded programmes

For the purposes of this paper, if programmes include the following elements they have been excluded from analysis as the level of variation from Y Combinator is too high:

- seed funding mechanisms without a structured education programme[4]
- education programmes without a seed funding or financial support mechanism[5]

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[3] Generally $50,000 per company or less

[4] For example, CharlesRiverVentures QuickStart, Spark Capital's Start@Spark, and NYCSeed

[5] For example, FirstGrowth Venture Network

- incubator facilities without a seed funding or financial support mechanism[6]

Sample financial model

Shown below is a simple financial model created to demonstrate how a programme like Y Combinator can be successful.[7] In each cohort, 50% of companies are expected to fail. A further quarter of companies are forecasted to earn back just the original investment. Despite those failure rates, the programme is expected to generate significant returns for programme investors through early investment in companies with large exits.

Investment: $20,000 investment for ~5% equity.

Cohort size: 20 companies

Total investment required: $400,000[8]

Assume 1 company achieves a large exit:

- $100,000,000 value at exit
- Accelerator has 0.5% ownership at exit
- Exit value for accelerator = $500,000

Assume 4 companies achieve good exits:

- $10,000,000 value at exit
- Accelerator has 2% ownership at exit
- Exit value for accelerator = $200,000

Assume 5 companies break even:

- $500,000 value at exit

[6] For example, EvoNexus, BetterLabs, and Dog Patch Lab

[7] Full calculations shown in Appendix B

[8] General overhead is ignored in this model

- Accelerator has 4% ownership at exit
- Exit value for accelerator = $20,000

Assume 10 companies lose all value:

- Exit value for accelerator = $0

Per cohort, this generates a return of $1.4million from the original $400,000 investment; a multiple of 3.5x and a 13.35% Internal Rate of Return (IRR).[9] Y Combinator and TechStars, though still in the early stages of investment, have already started to prove this generalized model successful.

Selected data on funding and exits

Since funding the first batch of startups in the summer of 2005, Y Combinator has funded over 140 companies. Six of those 140 companies have exited, some with valuations as high as $15million. Omnisio was in the Y Combinator Winter 2008 cohort[10], and was purchased by Google in July 2008 for $15 million in cash. Assuming a 6% initial stake with no dilution, Y Combinator's return from Omnisio's sale alone was $900,000. Across the known Y Combinator exits and this author's conservative estimates of acquisition prices, Y Combinator may have already had over $2million in returns; enough to break even on their initial investments of all Y Combinator startups from founding through the summer of 2008.

TechStars is the only other programme to have had multiple exits. Four of the ten companies founded in the summer of 2007 have exited, for an estimated combined total of $12 million. Assuming TechStars had a 5% stake in the companies, the exits generated a return of over $600,000. With fifteen startups still to exit or die, TechStars has likely already generated a profit from the first two cohorts alone.

Both Y Combinator and TechStars have also had good success in the companies they fund receiving follow-on funding. Of the 71 startups that Y Combinator funded between summer

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[9] Model assumes an exit ten years after initial investment. The IRR is highly sensitive to the timing of returns, so this should only be taken as a general guide.

[10] January to March 2008

2007 and spring 2009, fourteen have received follow-on funding.[11] Of the 20 startups that TechStars funded in the same period, fifteen have received follow-on funding. Also in the same period, 12 of the 14 Seedcamp funded companies have received follow-on funding.[12]

[11] This number is far higher, as the author was generally only able to find records of large funding rounds. Seed and angel level rounds are rarely announced widely.

[12] Again, all figures in this section are conjecture based on reports in the press, comparisons with similar companies, and educated guesswork. The author has been provided with no insider information, and the points above should be taken as such. However, the estimates are believed to be reasonable and wherever possible, conservative.

Why entrepreneurs participate in accelerators

When it comes to choosing a seed accelerator program, many elements enter into an entrepreneurs decision, described below. In order to quantify the importance of each element, individuals that have participated in Y Combinator and similar programmes, as well as individuals that are contemplating applying to the programmes, were surveyed. All figures are out of a scale of 1-10, where 1 signifies "Doesn't matter at all" and 10 signifies "The single-most important element" to the entrepreneur.

Financial Support & Initial Funding

Y Combinator aims to provide enough financial assistance that founders can live for the term of the program without any other job or assistance. Most of the other programs have followed their lead, but some are clearly more generous than others. Seedcamp, for example, provides a team with as much as €50,000 (~$71,000 at current exchange rates). This level of funding will support a team throughout the programme period, but also several months beyond.

In the survey, the level of funding element averaged a score of **4.14**. Recognizing the long-term impact of that funding, the post-money valuation scored higher, an average of **5.25**. While funding clearly matters to entrepreneurs, the level of support is not important so long as it is sufficient enough that they can focus on their business.

Product Support

Paul Graham, the founder of Y Combinator, is well known amongst startup founders for his strong product support. Having developed Viaweb, the first web application software and successfully selling it to Yahoo!; he has extensive experience in the industry.

While entrepreneurs typically have a strong vision for their product, the people looking to be funded by Y Combinator or other accelerator programmes are generally starting their first company. Part of their reasons for going through an accelerator programme is to get the hands-on advice on building the best product they can from experienced entrepreneurs. This advice comes from the founders, the speakers and other guests that are part of the education programme as well as the fellow companies in their cohort.

When polled, the element of product support averaged a score of **7.13**. This indicates that while product support is a very strong element in a seed accelerator, there are other elements that do more to drive an entrepreneur's success.

Business Support

It is very easy for unprincipled investors, contractors and others to take advantage of new and/or naive entrepreneurs. Startup founders are appropriately concerned about making early business mistakes that could be very costly to their company or wealth in the long-term.

Accelerators are very helpful to first-time entrepreneurs, often creating and submitting all of the company formation and documents on their behalf. Additionally, their guest speakers and educational programmes often talk founders through the common problems and issues they will need to consider as their company grows and seeks future funding. In addition to legal and financial issues, there are issues around hiring, public relations, marketing, pricing strategy, and many others.

This element scored an average of **7.42** in the survey. It appears that first-time entrepreneurs view the support given around business establishment and operations to be only marginally more important than support for the product itself.

Brand Connections

One of the more difficult aspects to measure in these accelerator programmes is the value of the programme brand. The value rests in a permanent connection which includes identity and affiliation, alumni networks and sense of community. A programme's brand is established primarily through their successes but also how they distinguish themselves from their competitors.

Y Combinator built its brand early when one of its first startups, Reddit, was acquired by Condé Nast for what is believed to be several millions of dollars.[13] This first exit established its reputation as a very successful accelerator. TechStars has also had four exits amongst its first ten investments, establishing its track record.

[13] Based on speculation. Exact data has never been released.

Seedcamp, on the other hand, has built a very powerful brand in Europe because of its different approach to the accelerator programme. They now hold a series of Mini-Seedcamps all across Europe, bringing high-profile advisors and investors while developing a ladder of different levels of advice and community. The main Seedcamp Week sees over twenty startups participate, though Seedcamp itself funds only five to seven at the end of the Week. Thus, a startup could apply and participate in a mini-Seedcamp, then apply to the main Seedcamp Week and potentially get funded by Seedcamp. At each step of this ladder, a startup gets mentoring and advice, though the seed funding is only provided to the winners of Seedcamp Week. This distributed and layered approach has created a strong brand in a short period of time.

But the other way that programs build their brand is by how they distinguish themselves from their competitors. Y Combinator specifically points out that they are not an incubator in that they don't provide office space and each startup is generally left to their own devices during the programme. Seedcamp has built their programme around a wide and distributed mentoring programme that eventually leads to funding; the structured mentoring is less intense once funded.

TechStars has built their brand around a very closely-knit community, focused in the small town of Boulder, Colorado. Startups share common office space and with only ten startups in a cohort the groups bond more closely than larger programmes. While TechStars companies aren't required to stay in Boulder after the programme, there is a significant effort to build an ecosystem in the city. Helping this, each startup is matched with 6-8 mentors that work only with that startup, building very close relationships.

Startup founders often see acceptance into a seed accelerator programme as validation of their work, and leverage the brand affiliation in marketing and fundraising efforts. The alumni network enables startups to quickly gain early adopters of new technology since founders experiment and test each others' products. This early feedback and adoption helps founders improve their own companies, and is related to the size of the alumni base.

Brand reputation was voted an average of **7.83** on a scale of 1-10 in importance to startup entrepreneurs polled. It demonstrates that there is a lot of value in the strength of the community built around the seed accelerator programme.

Connections to future capital

Perhaps the most important aspect to long-term success of companies funded through seed accelerator programmes is through connections to investors. While the programmes typically ensure that the first product is developed and pitched, many of these companies will require some level of capital to continue operations beyond the programme. Knowing this, entrepreneurs will gravitate toward the programme that can give them the best connections to make future fundraising as easy as possible.

Y Combinator hosts weekly dinners with entrepreneurs and investors, providing a rich, structured source of contacts throughout the programme. Similarly, Seedcamp's Seedcamp Week offers startups the opportunity to interact with and pitch to a variety of potential investors, even if the startup isn't eventually funded by Seedcamp. TechStars and other programmes host talks by entrepreneurs and investors in a structured manner throughout their programme in an effort to form connections. The close relationship with a broad selection of mentors helps many TechStars companies in their fundraising.

In addition to the structured source of contacts, these programmes are often good sources of unstructured contacts; contacts made outside the official educational programme, often by networking. They can be friends or associates of the structured contacts or of the programme founders. While the direct, structured contacts are valuable, their connections to the wider world of investing means that entrepreneurs can quickly have high-quality introductions to a large number of potential investors.

At the beginning of an accelerator programme's life, the quality and quantity of its contacts are proportional to the quality and quantity of the programme founders' networks. The better the network, the better the programme will be for it. However, as the programme evolves over time, the quality of the contacts becomes proportional to the quality of the startups that have come out of the programme.

The majority of these programmes end with a Demo Day where all of the companies demo their products to investors. These Demo Days are increasingly popular with angel investors and early-stage venture capital firms, as they are an efficient way of evaluating a large number of potential companies in a short period of time. Demo Days have also received wide coverage in the press, particularly on early-adopter blogs like TechCrunch, helping companies attract early users.

Overall, connections to capital was by far the most valued element of a seed accelerator programme by entrepreneurs, averaging a score of **8.51**. This demonstrates that while the programme itself is important to the success of the business, entrepreneurs are concerned most about the long-term success of the business and value highly the connections to potential sources of capital.

Summary

Startup founders appear to have their long-term interests in mind when selecting between seed accelerators. Getting connected to potential investors maximizes a startups survivability by helping ensure funding is available when required. Brand affiliation is the second-highest scoring element, as branding can be leveraged throughout the life of a startup for validation and positive press. While the amount of seed funding received and the valuation is important for a startups' immediate survival, it doesn't appear to truly be a differentiating factor.

Why programme founders start accelerators

Just as entrepreneurs seek seed accelerator funding for a variety of reasons, people start the seed accelerators for a variety of reasons. Paul Graham has written that he and his partners started Y Combinator "because it seems like such a great hack." They were excited about an inefficiency in the market for startups that they could effect. However, financial returns and helping young entrepreneurs were also attractive reasons for starting the programme. The reasons below show the variety of motivations behind the people that start seed accelerators.

Creating an ecosystem

One of the more recent common reasons to starting a seed accelerator programme is to use them in creating an ecosystem. The general notion is that encouraging startups in the community will increase the overall number of companies getting started and hopefully long-term employment from those companies. Recent examples include both Boulder, Colorado and London, England, where TechStars and Seedcamp aim to use their accelerator programmes as catalysts to build a bigger and better environment for startups in those cities, respectively. Seedcamp is attempting to do this for all of Europe, though largely centralized in London.

Financial Return

Rationally, the people starting incubation programmes are seeking a positive financial return. Traditionally, angel investors seek to achieve a ten-fold return within ten years of their original investment. This generates a 25% IRR, which is appropriate given the risk involved in early-stage investing. While initial data looks as if Y Combinator and TechStars will be profitable based on known exits, it will be several years before financial success can be truly measured.

High-quality deal flow

For programme founders that enter as angel investors, being involved in an accelerator programme provides them a source of very high-quality deal flow for personal angel investing. They are able to review a number of startups ideas and teams in the fields they're interested in and work with the most promising young companies, most of whom have already reached important milestones through the accelerator. Programme founders' early involvement makes it easy for them to continue their involvement with the top companies when those companies are raising additional funds. This is a rarely spoken about but highly valuable result for the founders of an accelerator programme.

Local / regional influence

If the accelerator programme is successful, the founders of that programme can quickly gain local/regional influence. While Paul Graham was influential through his essays, he is far more influential now that he runs the most high-profile accelerator programme in the world. In his case, his writings directly led to the successful recruitment of talented entrepreneurs, which quickly built the reputation of Y Combinator. As Y Combinator has built its brand, Paul's essays now receive even more attention. Similarly, the founders of Seedcamp in London have become more influential in the European early-stage startup scene because of their involvement with Seedcamp.

Business and community leaders recognize that a programme that helps new companies establish roots in a region is a very valuable commodity. As a consequence of that, the programme's founders have the potential to build a strong influence in their community. If viewing early-stage startups as a community, starting an accelerator programme will make founders more prominent in the world of startups. David Cohen is known much more widely on a national basis due to his work in founding and running TechStars.

Startup excitement without startup pain

Many incubation programmes have been started by individuals who truly enjoy startups. They often have backgrounds as entrepreneurs or venture capitalists. Accelerators allow them to stay involved with the rewards of a startup (new technology, problem solving, innovation) while avoiding the pain of startups (minimal sleep, minimal money, constant stress).

Complications

There are certain elements to seed accelerator programmes that are not clean-cut. The reasons are fundamentally issues around personal life and money; the decision as to where founders live and work, and the mechanics of follow-on fundraising.

Location desires & legal issues

The location of the programme can be a significant obstacle when matching entrepreneurs to seed accelerator programmes. Entrepreneurs typically would rather stay where they have roots, but they also want to give their business the best possible chance for success. These gulfs become even larger when crossing international boundaries.

Currently, a number of seed accelerator programmes are establishing themselves in cities across the United States and Europe to help invigorate the startup culture in those cities. Paul Graham has eloquently argued in his essay "Can you buy a Silicon Valley? Maybe." that programmes like Y Combinator don't affect the local culture. He wrote,

> *People sometimes think they could improve the startup scene in their town by starting something like Y Combinator there, but in fact it will have near zero effect.*
>
> *[...]*
>
> *The people we funded came from all over the country (indeed, the world) and afterward they went wherever they could get more funding—which generally meant Silicon Valley.*
>
> *The seed funding business is not a regional business, because at that stage startups are mobile. They're just a couple founders with laptops.*
>
> *If you want to encourage startups in a particular city, you have to fund startups that won't leave.*
>
> *[...]*
>
> *Good startups will move to another city as a condition of funding. What they won't do is agree not to move the next time they need funding. So the only way to get them to stay is to give them enough that they never need to leave.*

So if one of the goals of the programme is to establish a strong local startup culture, recognize that a seed accelerator programme is not a panacea. For startups to start and stay, there have to be enough resources (money and talent) in the city to ensure they don't leave when they get to their next stage of growth.

That said, entrepreneurs want to avoid unnecessary disruption in their personal lives, as it takes time and energy away from their business. In the survey of startup founders described in the previous section, one respondent even wrote, "Location is the most important factor by far. Most of the programmes are roughly the same offering, so location is the differentiator." As long as a community has a sufficient pool of potential startups, a seed accelerator programme will have sufficient interest, either from local companies or from startups looking for seed money and mentorship.

Where this element of location becomes even more complicated is between the United States and Europe. Simply put, it can be very complicated to travel to the US from outside the country for a seed accelerator programme.[14] Furthermore, differences such as time-zones, and culture create high barriers for companies to move wholesale across international boundaries. Seedcamp has taken advantage of these barriers between the United States and Europe to create the first seed accelerator program that draws from all across Europe, in Seedcamp's case to London where significant venture capital and angel resources exist.

Some accelerator programmes have focused on location as a high-priority non-financial goal, which can make it difficult for programs and entrepreneurs to find the best fit. An example of a structural non-financial goal is that of AlphaLab, an accelerator started in the city of Pittsburgh. Since is it funded by the State of Pennsylvania, companies are expected to "maintain a significant presence in Pennsylvania after the program." While the program may, and likely will, find entrepreneurs that will start successful companies, they are restricting their pool of potential applicants and thus the potential magnitude of its success.

Follow-on Funding

Another complication with seed accelerator programmes is the nature of follow-on funding, though it varies depending on the programme's initial structure. Programme founders need to

[14] For example, the founder of DailyBooth, from the Y Combinator summer 2009 class, had visa complications and wasn't able to spend the summer in Silicon Valley with the other funded companies. His Demo Day pitch was done via videoconference.

be aware of the scope of the commitment they're making to entrepreneurs and how that may or may not affect their startup's chances for follow-on-funding.

Y Combinator, TechStars and SeedCamp all operate similarly in this vein. The programmes fund startups only at acceptance into the programme; no further financing is available. However, the programme founders and mentors do invest personally in future rounds with their startups. When interviewed, David Cohen of TechStars mentioned that he was initially worried about the startups in which he did not personally invest after the programme. His concern was that these startups would have a difficult time finding funding if the founders of the programme that knew them best decided not to invest. However, he has since discovered this hasn't been an issue and that other professional investors understand that some startups just don't meet a particular angel's investment thesis. While he has personally invested in only a small number of the TechStars startups, virtually all of them have found some future financing.

It should be recognized that Y Combinator and TechStars were both founded by angel investors, whereas SeedCamp was founded by a wide consortium of angel and VC investors. When VC's with significant resources choose not to invest in companies which they solely incubated or initially funded[15], the potential danger signal to other investors is much stronger. This is why VC-backed incubator programmes were not considered seed accelerators within the scope of this paper.

The problem when a seed accelerator programme limits itself to investing in only one seed round is that the programme cannot take advantage of funding further rounds in successful companies, and thus avoid dilution of their ownership stake. The programme is therefore limited in its returns, as with each follow-on round of funding in a startup the programme is diluted further. The accelerator programme founders themselves do have a chance to invest in follow-on rounds, and do, though they rarely lead an investment. This is why it is particularly interesting that Sequoia Capital essentially invested in Y Combinator in the spring of 2009. Sequoia is receives returns on the same terms as Y Combinator, from the original seed funding only. One can only presume that the internal valuations that Y Combinator keeps of its

[15] For example, CharlesRiverVentures QuickStart, Summer@Highland, Start@Spark

companies demonstrates that the programme is a worthwhile investment, even when adjusted for dilution.

A unique case that has recently started is that of a sufficiently large company hosting a seed accelerator of their own. Springboard was just recently founded in Cambridge, UK by the joint Chief Executive Officers of Red Gate Software, a highly successful local software company. They saw the programme as largely formalizing what they had been doing informally for some time; hosting entrepreneurs and helping them along. Red Gate is removing the complication of follow-on funding by simply not taking an equity stake in any of the Springboard companies. But the founders believe even without an equity stake the programme will bring other benefits to their primary business:

> *We think that getting to know smart people doing interesting things will, in the long term, be good for Red Gate. In the future, we might end up licensing your technology, investing in your company or maybe even buying it. Or maybe we won't. Ultimately, all deals come down to relationships. So we want to build them.*
>
> *Plus, it just feels like a good thing to do. We don't know what they'll be, but we think interesting things will happen.*

Depending on the focus of a particular seed accelerator, it could be advantageous for an existing company to start a similar programme. However, entrepreneurs will be wary of anything un-authentic and biased toward the investor, so great care must be taken in the structure of who gains what from the relationship. Springboard, by focusing on startups with Business-to-Business (B2B) business models but taking no equity, gains early looks into complementary technology and teams without any chance of limiting the startups aspirations. The early perspective on new technology and teams could be valuable for Red Gate. But by taking no equity Springboard ensures the entrepreneur's freedom to pursue any potential growth path, even one competitive with Red Gate, and thus ensures the widest possible range of companies and founders can apply.

Essentially, the problem of perception when not investing in follow-on funding with every startup doesn't exist when angel investors are at the heart of the programme. Seedcamp, with a consortium of angels and VC's, and Y Combinator with Sequoia have shown that VC's can be involved with these programmes, provided they are part of a larger effort. Corporations are a very new case, and one that should be carefully managed to ensure freedom for startup founders. However, if the programme is solely funded by a VC firm, any startup where the firm does not participate in follow-on funding will still raise a danger signal to other investors, harming the startup. Knowledgeable startups will avoid seed accelerator programmes with a single VC backer.

Sources of Flexibility

Since Y Combinator's founding, most seed accelerator programmes have largely copied the Y Combinator format wholesale. However, there are some areas where investors can start to radically rethink how their future seed accelerator programme may work.

Length of programme

Most of the startup accelerators have used Y Combinator's three months accelerator period as a model when defining the length of their programme. It matches well to the summer university break, and is sufficient period of time in which to build a web application. However, there is great flexibility here for innovation.

Based on reports from Y Combinator, TechStars and others, startup founders aren't necessarily the stereotypical 21-year-old recent university graduate. While some do fit that profile, they also include a much greater range of ages and circumstances. In other words, there is no need to frame the length of the programme around summer holidays.

What is perhaps most important is that the programme is long enough that startup founders can develop a demo product and be able to pitch it by the end of the programme. As seed accelerators expand outside of web applications, this will become even more difficult to achieve within the 3-month window. While writing a web application can be done in just a few months, if the company requires a physical product to be built the time required before a true demo is ready will be much longer. Even at Y Combinator, typically only half to three-quarters of the startups funded are able to launch before the programme Demo Day.

New programme founders should specifically think about the reasons behind the length of their accelerator programme. Copying Y Combinator without a reason is a poor choice.

Vertical

So far, virtually all of the seed accelerator programmes are aimed at incubating web applications. This makes sense; there is strong demand for new web products and services and they are fairly straightforward to develop. In other words, there are generally no complicated supply chains, partner relationships, etc.

However, there is a huge potential in focusing a startup accelerator programme on a particular vertical, either industry vertical or technology vertical. Virtually any industry where there is a sufficient market size could be a focus for a startup accelerator, including medical devices, mobile phones, and music.

A further benefit of focusing on a particular vertical is that many of them are already clustered regionally. If a city or region is looking to build an ecosystem of startups, instead of copying Y Combinator and trying to get Web 2.0 startups to put down roots, they could instead look at the industries in which they are already strong.

Funding

Virtually every seed accelerator programme has funded their startups to the same level as Y Combinator, about $10,000 to $20,000 for 5-10% equity.[16] Alternately, some programmes provide little to no funding. Springboard provides living expenses and accommodation, but no direct funding. Seedcamp provides funding and takes equity of the Seedcamp Week winners, but doesn't provide funding for startups involved in any of Seedcamp's other programmes. While the level of funding appears to be appropriate for Y Combinator's business model, there is scope to revise this when designing other startup accelerators.

Education Programme

Seedcamp has shown the large scope for innovation in the educational programme of an accelerator, through several Mini-Seedcamp events across Europe and the Seedcamp Week itself. The Mini-Seedcamp one-day events provide advice, mentorship and contacts to selected startups. Again, while only 5-7 startups are selected for Seedcamp funding, 20 are selected for "Seedcamp Week," an opportunity for five days of intense advice, mentorship and networking for the selected startups.

Even within the traditional seed accelerators, there is a range of examples. While Y Combinator hosts weekly dinners with one or two guests each week, others like TechStars have a much more "hands-on" approach, partly because all of the companies are housed in a common space.

[16] Notable exceptions are Seedcamp, which provides startups with as much as €50,000, approximately $70,000 at current exchange rates and BootupLabs, which provides startups with $50,000 and a $100,000 line of credit.

Within an education programme, there are two types of advice: general advice applicable to everyone, and specific advice applicable to a single startup. The general advice is the advice that all startups need to understand; how to run a company, how to raise additional funding, the legal complications of startups, how to find and hire new employees, etc. The specific advice is typically product-focused: why would customers use a specific product, how to charge for a product or service, etc. In larger education programmes, the advice must be biased toward the general in order to be effective. But product-specific advice and education can be invaluable to the long-term success of a company, and should be included as a part of every accelerator programme.

A framework for creating new seed accelerator programmes

There is a clear framework to structuring any future startup accelerator programme. It starts with the strengths of the founders and the local environment, and focuses on what would make a new programme distinctive and compelling to entrepreneurs. Once programme founders have clearly identified how their programme will be compelling and what industry or technology it will be focused on, designing the remainder of programme elements is straightforward.

Founders and their backgrounds

The most important element in creating a successful startup accelerator programme are the programme founders. There simply must be a core person or persons involved that have experience in operating in a startup company and who have experience as angel or seed investors. Much of the early success of Y Combinator are directly attributed to the reputation of Paul Graham and his partners. Their success as hackers as well as businesspeople made them highly qualified to judge talent, help refine their startups' products, and guide their startups' efforts in turning products into businesses. That said, startup accelerator programme founders must be very clear where their strengths and abilities lie. When starting Y Combinator, Paul Graham understood that his strengths lay in web applications, and thus Y Combinator is generally focused on web applications.

Accelerator founders must have a history of operating and investing in their field, but they must also stick close to that field when starting an accelerator programme. This may be quite difficult; what a founder specializes in may be capital-intensive or otherwise difficult to frame as an accelerator. But in order to have the best chance of success, founders must be aware of their own background, strengths and resources.

Programme focus

The choice of programme focus is critical. To date, startup accelerators have generally focused on funding web applications, just as Y Combinator does. But as discussed above, there is a great capacity for innovation in the vertical focus of a new startup accelerator programme.

Startup accelerator founders must realistically survey their local city and region and truly understand its resources and capabilities. In Cambridge, England, for example, there is a strong history of entrepreneurial success across the fields of semiconductors, sensors and enterprise software.[17] A startup accelerator programme in Cambridge would have a high probability of success if it were centered on accelerating companies in these industries. A pre-existing network of talent, both in new startup founders and experienced entrepreneurs, would be incredibly compelling to startups looking for both funding and advice. When a new accelerator programme is compelling to entrepreneurs because it is in a resource-rich environment, it will attract the best startups focusing in that industry or technology.

DISTINCTIVE AND COMPELLING

The next most important element is a focus on distinction. Founders must create a programme with enough incentives or opportunities that startups will prefer it over other programmes. In other words, any new accelerator programme must be distinctive and compelling to entrepreneurs.

A recent trend in startup accelerators has been the founding of what are essentially copies of Y Combinator in other cities or regions. But a Y Combinator clone, focused on web applications, in a city that has fewer resources for startups and fewer connections for founders than Paul Graham in Silicon Valley is neither distinctive or compelling. That clone will see lower quality startups, provide them with fewer connections to additional capital and thus have a much lower chance of success for the accelerator programme. Y Combinator, and likely a small handful of others, will be the startup accelerators of choice for web applications. For those promising startups in other, smaller, cities, it is rare to have enough capital to avoid startups eventually moving to be closer to their investors in other cities.

Fundamentally, another startup accelerator focused on generalist web applications in a city outside of Silicon Valley is frankly not distinctive or compelling. However, assessing where the city already leads and using the local resources (specifically, talent and capital) in that leading industry will set a programme apart from competitors. Paul Graham addresses this point in a

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[17] Companies which include ARM, Cambridge Silicon Radio, Artimi, Plastic Logic, Autonomy, and Red Gate Software.

similar but different way in his essay "The 18 Mistakes That Kill Startups." Reason #4 is "Derivative Idea," in which he writes about Y Combinator applications:

> *Many of the applications we get are imitations of some existing company. That's one source of ideas, but not the best. If you look at the origins of successful startups, few were started in imitation of some other startup. Where did they get their ideas? Usually from some specific, unsolved problem the founders identified.*
>
> *[...]*
>
> *It seems like the best problems to solve are ones that affect you personally.*
>
> *[...]*
>
> *So instead of copying the Facebook, with some variation that the Facebook rightly ignored, look for ideas from the other direction. Instead of starting from companies and working back to the problems they solved, look for problems and imagine the company that might solve them. What do people complain about? What do you wish there was?*

If the word Facebook is replaced by Y Combinator, the idea is similar. Don't look to copy Y Combinator with some variation, look to found a startup accelerator from the other direction. Once you have a qualified group of founders, the most important element in getting started is determining exactly what will be distinctive and compelling about a new startup accelerator programme.

Programme goals

The next biggest decision in developing a startup accelerator programme is the choice of goals. Programme founders need to be very clear in their own goals. If the primary goal is a financial return, then there must be a substantial number of startups applying and that a good number are funded in each cohort. If the primary goal to build an ecosystem, the emphasis must be on the educational elements of the programme and its support network. Building an ecosystem may involve funding companies that may not be likely to generate a significant return, but by funding them the ecosystem is made larger and stronger.

Naturally, every programme wants to achieve a good financial return and build an ecosystem. But at times these two goals will come into conflict and founders should understand from the start which is truly the more important goal for them. It is possible for these goals to shift over time, particularly when ecosystems are built strong enough to allow accelerator programme to fund only those startups that will likely generate positive returns.

Funding

Decisions about funding level derive directly from the choice of programme focus and programme goal. It is not at all formulaic, but instead depends on the founders' knowledge of the particular vertical on which the programme is focused. As discussed earlier, web applications in particular are notoriously capital-efficient, as a fairly minimal investment is required and consequently a small portion of equity is taken.

Ideally, the level of funding will be enough to get the startup to their next milestone. In Y Combinator's case, it typically takes a startup from an idea to having a demo for investors, at which point many startups pitch for more funding to get the startup to wide launch or a similar milestone. Startups in different industries require different levels of funding to reach the next major milestone. The startups should be funded at an appropriate level of personal funds for the full term of the programme, commonly what a graduate student might earn as part of a research fellowship, as well as whatever funds are required to get the business to the next milestone. The full term may likely be longer than three months, particularly when dealing with anything related to hardware, such as electronics, machining or packaging. An appropriate level of funding for some accelerators may be above what investors would consider seed level funding. Provided programme founders are comfortable with the financial arrangements and they are fair to startups, the semantics largely do not matter.

Finally, the programme should take as low a percentage of equity as possible, while still ensuring that the programme has a chance to meet financial success metrics. Ideally, this will be at a valuation such that at the end of the programme, having reached a major milestone in development, it is straightforward for the startup to raise additional funds at a higher valuation.

Size

Programme founders must also make a conscious decision regarding the number of startups in their programme. Too many risks a very large investment outlay, but too few may not provide enough opportunities to attract key advisors and investors. Again, this depends highly on the programme's focus as well as the funds available.

Fundamentally, the more startups that a programme funds, the more opportunities that exist to generate the desired returns. But each startup demands the time and attention of the founders, so care should be taken to ensure that this element is not unnecessarily diminished. Early in the life-cycle of a seed accelerator it is likely wise to limit the size and let the programme founders adjust the programme based on initial feedback. Once this formula proves successful, the programme can then expand.

In some cases, particularly if a programme is focused on an industry that is more capital-intensive, financial constraints may mean funding fewer startups. Provided that the accelerator is comfortable with the risk involved, this needn't be an issue. It may be difficult to attract key figures to advise the startups and investors with only a small number involved. But as stated above, if the programme is distinctive and compelling, influential people will put effort in to ensure they're involved.

Education Programme

As discussed previously, there is still significant space for new accelerator programmes to innovate in their education programme. So long as startups have the opportunity to be mentored both on business topics and on product-specific topics that are applicable to their company, the entrepreneurs will be better because of it. Accelerators that operate in regions without a strong history of entrepreneurship will need to create a more comprehensive educational programme, while accelerators that focus on more experienced entrepreneurs can likely be successful with a more tailored educational programme. The decision will need to be based on the exact technology or industry vertical on which the accelerator focuses, and the backgrounds of the entrepreneurs in the programme.

Office Space / Incubation

There are two schools of thought when considering the decision to offer office space or not. Y Combinator does not, as their ethos is that they want entrepreneurs to build their team and truly focus on building the product during the programme. Alternately, TechStars does offer office space and tries to build a tight-knit community of startups. Each of these decisions works for each programme.

Any new programme will need to evaluate the practicalities of offering office space, such as rent, internet access, printing, etc. Additionally, new accelerators should evaluate what the opportunities would be when startups work closely together. This can be both positive, when startups easily learn from each other, and negative, when people and activities distract from the task at hand. If the net benefits of startups working together outweigh the practical cost, office space should be provided.

Brand

New seed accelerator programmes need to establish a brand, as quickly as possible. This includes everything from visual identity and website design to the list of mentors and advisors to the programme. Fundamentally, the brand is built from what the accelerator does and the success of the startups from that accelerator. If a new programme focuses on recruiting the best startup founders, best startup ideas and helping them build the best companies possible, the brand identity will come naturally.

An element of brand that is common amongst current top seed accelerators is service back to their community. This isn't just benevolent, as it leads to better quality applicants in the long-term. Hacker News is a community built alongside Y Combinator, Mini-Seedcamps were started by Seedcamp, and TechStarsTV shows what building a company is like in the TechStars programme. Providing a service or resource back to the startup community is another key component to building a successful seed accelerator brand.

Summary

It is still early in the development of startup seed accelerator programmes. Y Combinator, by being the first programme and a highly successful one has set a high standard for others to match. The framework discussed in this paper should provide sufficient guidance to anyone looking to start their own seed accelerator programme. Starting from a core knowledge of the people and resources available to the programme and what industry or technology vertical on which to focus, programme founders need to develop a distinct and compelling reason for existence. If those three elements are defined and marketed honestly, the programme has a solid base for long-term success.

Appendices

Appendix A: List of all Seed Accelerator Programmes

Appendix B: Example Seed Accelerator Programme financial model

Appendix C: List of all companies funded by Seed Accelerator Programmes

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